AMSAT News Service Weekly Bulletins
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AMSAT NEWS SERVICE
ANS-191

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to: ans-editor [at] amsat.org.

You can sign up for free e-mail delivery of the AMSAT News Service Bulletins via the ANS List; to join this list see: https://mailman.amsat.org/postorius/lists/ans.amsat.org/

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ANS-191 AMSAT News Service Weekly Bulletins

To: All RADIO AMATEURS
From: Radio Amateur Satellite Corporation
712 H Street NE, Suite 1653
Washington, DC 20002

DATE 2022 Jul 10

Bo Lowrey, W4FCL, Named Director, AMSAT Ambassador Program

AMSAT President Robert Bankston, KE4AL, is pleased to announce the appointment of Mr. Bo Lowrey, W4FCL as Director, AMSAT Ambassador Program. Bankston adds, "Bo is eminently qualified to re-energize this important aspect of AMSAT's presence in the Amateur Radio community. His seemingly endless credits include being a NASA/JPL Solar System Ambassador, NASA OSIRIS-Rex Ambassador and NASA International Space Station Ambassador. We welcome Bo's addition to the AMSAT leadership team and we encourage all previous AMSAT Ambassadors as well as those members interested in becoming ambassadors to reach out to Bo and offer their support."

Before Lowrey's retirement he most recently served as Director - Space Science and IT at the National Air and Space Education Institute in Louisville, Kentucky. He has 55 years experience in the electronics and IT fields and has advanced degrees from the University of Louisville in Occupational Training and Development, and Curriculum and Instruction.

AMSAT Ambassadors provide presentations, demonstrate communicating through amateur satellites, and host information tables at club meetings, hamfests, conventions, maker faires, and other events. Persons

interested in learning more about the AMSAT Ambassador program or becoming a AMSAT Ambassador should email volunteer at amsat dot org.

[ANS thanks AMSAT for the above information.]

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Proceedings. Authors do not need to present at the conference to have their papers included in the Proceedings. Submit papers via e-mail to Maty Weinberg, KB1EIB (kb1eib(a)arrl.org) by September 1, 2022. Papers will be published exactly as submitted and authors will retain all rights.

Conference papers will be distributed as pdf's to DCC attendees. Printed copies of the papers will be available for sale at Lulu (www.lulu.com).

Paper and presentation topic areas include, but are not limited to software defined radio (SDR), digital voice, digital satellite communication, digital signal processing (DSP), HF digital modes, adapting IEEE 802.11 systems for Amateur Radio, Global Positioning System (GPS), Automatic Position Reporting System (APRS), Linux in Amateur Radio, AX.25 updates, Internet operability with Amateur Radio networks, TCP/IP networking over Amateur Radio, mesh and peer-to-peer wireless networking, emergency and homeland defense backup digital communications in Amateur Radio.

Hilton Charlotte Airport is hosting the 2022 ARRL and TAPR Digital Communications Conference (DCC) and is now offering special room rates for the DCC at $99 per night. The special room rate is good until August 15, so make your reservations ASAP online or calling 1-800-445-8667 and ask for the "Digital Communications 2022" rates.

More information about TAPR - Tomorrow's Ham Radio Technology Today can be found that their website https://tapr.org/call-for-papers-2022-digital-communications-conference/.

[ANS thanks TAPR.org for the above information.]

NASA Podcast – Amateur Space Radio

On Episode 251 of NASA's "Houston We Have a Podcast", Courtney Black describes the Amateur Radio program that connects astronauts in space to people and students around the globe. This episode was recorded on May 27, 2022.

Along with jam-packed days of science and maintenance, astronauts aboard the International Space Station dedicate some time to connect with people on Earth. It can be by an IP (internet protocol) phone to call a family member, a televised event to connect with media, or even amateur radio to connect with students.

Amateur Radio on the International Space Station, or ARISS, helps create education opportunities that inspire students to pursue careers in STEM-related fields – that's engineering, math, science, or technology – by having the opportunity to talk to crew members on orbit. This podcast is the story of a former teacher who has seen first-hand how ARISS communication impacts students' lives here on Earth, and how important this program is for future generations of space explorers.

Courtney Black is an education project manager with the International Space Station U.S. National Laboratory. Before joining the National Lab, Black served as a formal educator for 14 years, educating elementary to high school students. Her passion for incorporating space education in lessons earned her recognition among her peers and allowed for students to participate in once-in-a-lifetime opportunities, such as ARISS contacts and a downlink with the International Space Station. Black is a Space Station Ambassador, a Solar System Ambassador, teacher liaison to the Space Foundation, Space Center Houston SEEC (Space Educator Expedition Crew) crew member, and an member of the American Institute of Aeronautics and Astronautics and the Civil Air Patrol.

Black has presented at multiple conferences and is excited to continue presenting on topics to help bring awareness and encourage utilization of a myriad of resources available which aim to improve life on Earth through the investigation and exploration of space. Listen to the podcast at https://nasa.gov/johnson/HWHAP/amateur-space-radio.

[ANS thanks AMSAT-UK for the above information.]

Changes to AMSAT-NA TLE Distribution for July 7, 2022

Two Line Elements or TLEs, often referred to as Keplerian elements or keps in the amateur community,

are the inputs to the SGP4 standard mathematical model of spacecraft orbits used by most amateur tracking programs. Weekly updates are completely adequate for most amateur satellites. TLE bulletin files are updated Thursday evenings around 2300 UTC, or more frequently if new high interest satellites are launched. More information may be found at https://www.amsat.org/keplerian-elements-resources/

The following satellite has been added to this week's AMSAT-NA TLE distribution:
- SNUGLITE 2 NORAD Cat ID 52899 (Thanks to Nico Janssen, PA0DLO for identification).

The following satellites have decayed from orbit and has been removed from this week's AMSAT-NA TLE distribution:
- Tsuru NORAD Cat ID 47927 (decayed form orbit on 7/5/2022 per Space-Track).
- GuaraniSat-1 NORAD Cat ID 47931 (decayed form orbit on 7/5/2022 per Space-Track).

[ANS thanks Ray Hoad, WA5QGD, AMSAT Orbital Elements Manager, for the above information.]

CelesTrak Changing Domain Used

If you use Celestrak for TLEs you might have noticed that your tracking application has stopped updating. This is due to Celestrak moving from .com to .org so you should change links in applications soon as possible. For further information see:
https://celestrak.org/NORAD/documentation/gp-data-formats.php.

[ANS thanks AMSAT-UK for the above information.]

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Contact is go for Saturday, July 16, 2022 at 11:10 UTC.

The latest information on the operation mode can be found at
https://www.ariss.org/current-status-of-iss-stations.html

The latest list of frequencies in use can be found at https://www.ariss.org/contact-the-iss.html

[ANS thanks Charlie Sufana, AJ9N, one of the ARISS operation team mentors for the above information.]

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  Friday, October 7, 2022 to Sunday, October 9, 2022
  Event Center at Archer
  3921 Archer Pkwy
  Cheyenne, Wyoming 82007
  https://wyhamcon.org/site

+ 2022 AMSAT-UK International Space Colloquium
  October 8 - 9th 2022
  Kents Hill Park Conference Centre, Milton Keynes
  https://rsgb.org/main/about-us/rsgb-convention/

+ 41st ARRL and TAPR Digital Communications Conference (DCC)
  September 16 - 18, 2022
  Hilton Charlotte Airport Hotel
  Charlotte, North Carolina
  https://tapr.org

[ANS thanks Paul Overn, KE0PBR, AMSAT Events page manager, for the above information.]

Satellite Shorts From All Over

+ Your shopping dollar counts! The AmazonSmile Foundation issued AMSAT a $377.03 donation as a result of AmazonSmile program activity between January 1 and March 31, 2022. If you are not already signed up, do so today. Look for Radio Amateur Satellite Corporation as your charity of choice.

+ NASA is set to release its first images taken by the James Webb Space Telescope next week. Why it matters: This long-awaited milestone will set the stage for the rest of the $10 billion telescope's mission to rework our understanding of how the universe evolved from the earliest galaxies to today. Driving the news: The first photos are set for release at about 10:30 AM EDT (14:30 UTC) next Tuesday. A press conference announcing the images can be viewed via NASA TV at that time (https://go.nasa.gov/3AvesJq). NASA has already released some early alignment images taken by JWST, but Tuesday's photos will be the first full-color photos that will show what the telescope can really do.[ANS thanks Axios Space for the above information.]

+ A six-month mission to the International Space Station could cost astronauts years of bone health, according to a new study. Understanding how a person's health is affected by time in space is crucial for space agencies hoping to send astronauts to destinations like the Moon and Mars in the future. The study, published in the journal Scientific Reports (https://bit.ly/3yFKH7g), found that weight-bearing bones - like those in the legs - didn't recover fully from their time in space even after a year on Earth. The study's sample size - at 17 astronauts - is pretty small, so more research is still needed. Studies looking at the health effects of spaceflight tend to be relatively small in general - after all, fewer than 650 people have been to space, and even fewer still have stayed there for months on end. [ANS thanks Axios Space for the above information.]

+ NASA has reestablished contact with one of its satellites that stopped communicating on its way to the moon. Engineers were able to contact the tiny CubeSat on Wednesday after it ceased communication with the Deep Space Network on Tuesday. The DSN is NASA's radio antenna network that supports interplanetary spacecraft missions as well as some orbiting Earth. The CubeSat is the Cislunar Autonomous Positioning System Technology Operations and Navigation Experiment, also known as CAPSTONE. The satellite left Earth's orbit Monday, marking an important milestone on its planned four-month journey to the moon. [ANS thanks CNN for the above information.]

Join AMSAT today at https://launch.amsat.org/

In addition to regular membership, AMSAT offers membership to:

* Societies (a recognized group, clubs or organization).
* Primary and secondary school students are eligible for membership at one-half the standard yearly rate.
* Post-secondary school students enrolled in at least half time status shall be eligible for the

student rate for a maximum of 6 post-secondary years in this status.
* Memberships are available for annual and lifetime terms.

Contact info [at] amsat.org for additional membership information.

73 and remember to help Keep Amateur Radio in Space!

This week's ANS Editor, Frank Karnauskas, N1UW
n1uw at amsat dot org